INITIAL STUDY FOR THE YORK CREEK DIVERSION MODIFICATION PROJECT, NAPA COUNTY, CALIFORNIA

Lead Agency:
The City of St. Helena

Prepared for:
The City of St. Helena

Prepared by:
California Department of Water Resources
Division of Planning and Local Assistance
Resource Restoration and Support Branch
Fish Passage Improvement Program

PROJECT LOCATION:

Napa County, California

T8N R6W SECT 26

USGS St. Helena quadrangle

N 38.510 W 122.496

November 2002

Part 1. Introduction

The purpose of this initial study is to determine whether the proposed project would result in any potentially significant impacts to the environment. This initial study has been prepared pursuant to the California Environmental Quality Act (CEQA).

List of Acronyms used in the document

(APE) Area of Potential Effects
(ARB) Air Resources Board
(BAAQMD) Bay Area Air Quality Management District
(CCC) Central Coast Steelhead
(CEQ) Council for Environmental Quality
(CEQA) California Environmental Quality Act
(CDF) California Department of Forestry
(CNDDB) California Natural Diversity Database
(CNPS) California Native Plant Society
(CRWQCB) California Regional Water Quality Control Board
(dbh) diameter at breast height
(DFG) Department of Fish and Game
(DWR) Department of Water Resources
(ESA) Endangered Species Act
(ESU) Evolutionarily Significant Unit
(HCP) Habitat Conservation Plan
(NEPA) National Environmental Policy Act
(NOAA Fisheries) National Oceanic and Atmospheric Administration-National Marine Fisheries Service
(NPPA) Native Plant Protection Act
(NRCS) Natural Resources Conservation Service
(NRHP) National Register of Historic Places
(NWP) Nationwide Permit
(THP) Timber Harvest Plan
(USACE) Army Corps of Engineers
(USFWS) U.S. Fish and Wildlife Service

Environmental Setting

The York Creek watershed originates from the California Coast Ranges on the western side of the Napa Valley watershed at an elevation of approximately 1,800 feet (550 m) (Figure 1). The York Creek watershed is about 5 square miles (13 km^3). The creek flows in an easterly direction through a narrow canyon before joining the Napa River northeast of St. Helena at an elevation of approximately 225 feet (69 m). The City of St. Helena maintains the only pre-1914 appropriative water rights for York Creek.

Approximately 2.5 miles (4.0 km) upstream from the mouth of York Creek, a concrete masonry diversion structure diverts water from York Creek to the St. Helena Lower Reservoir. The Lower Reservoir, located on an unnamed tributary to York Creek, supplies water for irrigation and other municipal uses and has a capacity of approximately 200 acre-feet. St. Helena Upper Dam (York Creek Dam) and Reservoir (Upper Reservoir) on York Creek are located approximately 0.5 miles (0.8 km) upstream from the diversion structure in York Creek Canyon (Figure 2). York Creek Dam and Upper Reservoir are no longer used for water supply.

Land use in the York Creek watershed consists of forested open-space, agriculture (primarily viticulture), and residential. Vineyards have been developed throughout the watershed. Residential areas within the city limits of St. Helena occur primarily between Highway 29 (River Mile 1.0 of York Creek) and approximately River Mile 1.75 of York Creek. Stevenson Junior High School is located south of the intersection between York Creek and Highway 29. Spring Mountain Road is a two-lane county road that runs adjacent to York Creek for nearly 2.5 miles and crosses the creek via three bridges.

Purpose and Need of the Project

The York Creek diversion structure and the York Creek Dam have been identified as significant obstacles to passage for federally listed steelhead trout (*Oncorhynchus mykiss*) in the threatened Central California Coast (CCC) Evolutionary Significant Unit. The channel of York Creek that is impacted by the current diversion structure is known to provide spawning and rearing habitat for CCC steelhead. The National Marine Fisheries Service (NOAA Fisheries) has recognized that the diversion (1) is an impediment to steelhead passage, (2) has a screen that does not meet NOAA Fisheries or Department of Fish and Game (DFG) criteria, and (3) likely is operated in a manner that results "in entrainment related mortality (take) of steelhead" (NOAA Fisheries 2000b). York Creek Dam is a complete barrier to upstream fish migration. Another project being planned by the U.S. Army Corps of Engineers (USACE), currently, will result in the removal of the York Creek Dam and accumulated sediment, opening up two miles of steelhead spawning and rearing habitat.

The Department of Water Resources (DWR) Fish Passage Improvement Program has assisted the City in planning and designing the proposed project. Through implementation of the proposed project there is an opportunity to improve fish passage at the diversion structure so that steelhead could gain consistent and reliable access to the reach of York Creek between the diversion and York Creek Dam. The proposed project would provide improved fish passage by cutting down the concrete diversion structure and raising the streambed elevation below the diversion with boulder weirs to reduce the drop that currently exists under most flow conditions. The resulting configuration would be comprised of a series of five 1.5-foot drops with resting pools that maintain a depth of approximately two feet between weirs so that fish will be able to pass over the weirs readily. The project would also remove the City's liabilities for "take" of juvenile steelhead at the City-owned diversion. The proposed infiltration gallery, consisting of perforated pipe overlain with gravel, would meet or exceed NOAA Fisheries and DFG

screening criteria for steelhead fry so that juvenile steelhead would not be entrained into the diversion pipe.

Scoping

Consultation and coordination of lead agencies with the public and other responsible agencies are recommended by the State CEQA guidelines and by the President's Council for Environmental Quality (CEQ). Planning meetings to discuss the project were held with NOAA Fisheries and DFG on February 28, November 28 and December 17, 2001, and June 7, 2002. USACE, the U.S. Fish and Wildlife Service (USFWS), the Regional Water Quality Control Board (RWQCB) and the Natural Resources Conservation Service attended one or more of the meetings. To ensure that provisions of CEQA are met, the City and DWR issued a public notice and conducted a public scoping meeting to provide information and answer questions about both the project to modify the diversion structure and the project to remove York Creek Dam. The public notice for the meeting was published in the St. Helena Star. Notices were also mailed to landowners in the York Creek watershed. The public scoping meeting was held in St. Helena on April 24, 2002.

Project Description

Construction Overview

The proposed project would cut the York Creek Diversion Structure down to the current grade of the streambed and construct a series of five boulder weirs to provide fish passage through the stream reach. An infiltration gallery would be constructed to maintain the City's water right for diversion to their Lower Reservoir without impeding juvenile out-migration past the diversion.

Work Window

Construction activities for work in the area from top of bank to top of bank would be June 15 to October 15, 2003 and all work would take place during daylight hours, beginning after 8 AM and ending before sunset each day. Night work will not be allowed.

Construction Description

The City will hire a contractor to implement the construction phase of the project. Best Management Practices for erosion control shall be implemented by the contractor throughout the construction phase of the project. Prior to removal of the diversion structure, the creek would be diverted around the construction zone using cofferdams, portable pumps screened to meet NOAA Fisheries and DFG criteria for steelhead fry, and an appropriately sized pipe. The temporary bypass would utilize pumps to minimize the

linear amount of stream that will be dewatered, 50 feet less of stream length than would be dewatered by a gravity diversion. Gravel cofferdams would be constructed upstream and downstream of the construction zone using clean river run gravels (with not more than 15% fines) or sandbags, which the contractor would obtain from a commercial source. Cofferdams would be placed after fish are captured from the construction zone and relocated so that entrapment of fish is minimized. Filter fabric or a filter bag is proposed to be placed on the face of the downstream cofferdam to minimize the amount of turbid water escaping from the grading zone. Approximately 5580 ft (0.13 ac) of USACE jurisdictional "waters of the U.S." would be affected by the project. The cofferdams and bypass pipe would be removed upon project completion, by October 15.

Fish relocation proposed as part of the project would be conducted by qualified biologists, approved by NOAA Fisheries and DFG, before and after placement of the cofferdams. Following NOAA Fisheries electrofishing guidelines (NOAA Fisheries 2000a), backpack electrofishing using continuous DC or pulsed DC, and netting in the stream reach to be dewatered, are proposed as the most effective method of capturing juvenile steelhead. An approved biologist will sample the stream channel prior to placing the cofferdams, by placing block nets upstream and downstream of the construction zone and electrofishing between the block nets, dipnetting as many fish as possible. Electrofishing would be conducted again after the cofferdams are in place, prior to dewatering the stream, to capture fish that may have been missed initially. After capture, juvenile *O. mykiss* from the construction zone would be transferred to suitable habitat upstream or downstream in York Creek, as appropriate.

After the temporary stream bypass is in place and fish relocation is complete, the diversion structure would be cut down to the grade of the current streambed using a concrete saw. Approximately 1000 ft^2 (0.02 acres) of the stream channel would be filled using clean fill material, most likely from a commercial source or from a source within the watershed, and boulder weirs will be constructed to create step-pools that would provide the head for diversion of flow into an infiltration gallery and provide for upstream fish passage. Staging for work at the diversion structure site would occur outside of jurisdictional Waters of the United States.

The boulder weir step-pool design consists of pools arranged in a stepped pattern separated by low boulder weir structures that would span the creek width, each of which would be higher than the one immediately downstream. Weir structures would have an arch-shape pointing upstream and the "legs" of the arch keyed into the creek banks. The proposed configuration would allow the boulders to brace against each other along the arch and distribute the force of the creek flows. The low point of the weir would occur roughly mid-stream at the top of the arch and weirs would get gradually higher closer to the creek banks. The drop in elevation between the weirs would be approximately 1.5 feet (0.45 m). Dimensions of boulders used for the weirs would be similar to other boulders naturally occurring at the site, ranging from two to three feet in diameter and irregularly shaped.

A gravity-fed infiltration system is proposed to replace the existing diversion dam system on York Creek. The infiltration system is made up of two main parts connected by piping: the infiltration gallery and the sump. The infiltration gallery design consists of 6-inch diameter perforated pipes placed approximately 2 ½ feet below the current grade

of the creek bed. The perforated pipes would span the width of the creek and would be oriented approximately perpendicular to the direction of flow in the creek. The perforated pipes would slope toward the left bank of the creek and connect to solid pipes to convey the intercepted water to the sump. The infiltration gallery would extend under the creek for approximately 40 feet and includes 20 perforated pipes arranged in two sets. Graded gravel in a layer 40" thick would surround the perforated pipes with the pipe lying approximately 10" above the bottom of the cut area of the stream bed (sub-grade). Two feet of gravel would be placed over the perforated pipes with geotextile fabric installed over the gravel pack and another one foot of gravel and cobble lain over the filter fabric. The remains of the current concrete dam structure and the boulder weirs would provide grade control to ensure that the gallery is not undermined. Physical disturbance of the gravel and cobble bed may be required after long-term operations, depending on natural sediment loads and high flow events in the creek. Construction and maintenance of the system would not require any new access roads, because the existing access road would be sufficient for the work proposed. However, the existing road would be covered with a layer of river-run gravel to minimize erosion of the roadway.

The sump, a concrete box approximately 8 feet wide by 10 feet long, to be located below ground level offstream of the creek, would act as the primary flow control for the infiltration system. Water collected from the infiltration gallery would travel through pipes into the sump. The outlet pipe invert would be designed to be flush with the bottom of the sump. An adjustable height weir near the downstream end of the sump would provide the flow control for the diversion system. The weir would consist of slots in the sump walls and supports for flashboards. Boards could be added or removed to regulate the diversion outflow. When the sump water level exceeds the top of the flashboard weir, water would overflow the weir and flow by gravity through the outlet and to the Lower Reservoir. Additional slots in the sump walls at the inlet and outlet would allow those pipes to be completely blocked with flashboards so that diversion could be stopped during the non-diversion season, as well as for emergency shut -off and maintenance.

Re-vegetation

After construction of the boulder weirs and infiltration gallery, the stream banks would be stabilized using appropriate erosion control methods such as hydroseeding. In areas where conditions are suitable, re-vegetation would be implemented on exposed stream banks using native trees, shrubs and grasses that adhere to the guidelines for Pierce's disease management. The species that would be used in the proposed plant palette are consistent with the species found naturally occurring in the vicinity of the project site during botanical surveys conducted by a DWR botanist, covering the range of flowering times of special-status species on the list.

The re-vegetation component of the project is expected to restore the quality and quantity of riparian habitat at the project site. Approximately 0.1 acre of riparian habitat will be planted at the project site to replace the same amount disturbed during project construction. Regular monitoring and specific success criteria will ensure that the re-vegetation results in properly functioning wildlife habitat that is similar to adjacent stands of native vegetation.

Regulatory Setting

Federal Laws

Clean Water Act (33 United States Code 1251-1376)

Section 404

Section 404 of the Clean Water Act establishes a permit program administered by USACE. The act regulates the discharge of fill material into waters of the United States, including wetlands. USACE also administers a Nationwide Permit Program to streamline permitting for certain types of activities that have only minimal impacts to the aquatic environment. Projects must comply with the terms of General and Regional Conditions to be authorized under Nationwide Permits (NWPs). The most recent NWPs were issued on January 15, 2002 (USACE 2002). A Pre-Construction Notification will be submitted to USACE for authorization of the project under NWPs 3(i) for Maintenance and 27 for Stream and Wetland Restoration.

Section 401

Applicants for a Federal permit allowing activities that may result in a discharge to navigable waters or their tributaries must obtain state certification that the discharge complies with other provisions of the Clean Water Act, and will not violate State and Federal water quality standards. The Regional Water Quality Control Boards administer the certification program in California. An application for 401 Certification of the proposed project will be submitted to the San Francisco Bay Regional Water Quality Control Board, once CEQA compliance is completed.

National Environmental Policy Act (42 United States Code 4321 et seq.)

The National Environmental Policy Act (NEPA) requires federal agencies to consider the environmental impacts of their discretionary activities and disclose potential impacts to the public. NEPA requires all federal agencies to identify and assess reasonable alternatives to proposed actions that will restore and enhance the quality of the human environment and avoid or minimize adverse environmental impacts. In the case of the York Creek Diversion Modification Project, if the project is authorized under the NWP program administered by USACE, it will be covered for NEPA compliance through the Environmental Assessments prepared for each NWP and the subsequent Finding of No Significant Impact (FONSI) issued for the NWP program by USACE on June 23, 1998.

Federal Endangered Species Act (16 United States Code 1531-1543)

The Federal Endangered Species Act (ESA) provides for the conservation of endangered and threatened species and the ecosystems upon which they depend. Section 7 of the act requires federal agencies to insure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat of these species. The USACE will consult with NOAA Fisheries, pursuant to Section 7 of the ESA, over potential impacts to CCC steelhead as it considers whether the proposed project should be authorized under NWPs 3 and 27.

Migratory Bird Treaty Act (16 United States Code 703)

The Migratory Bird Treaty Act (MBTA) protects and regulates the taking of migratory birds. The MBTA sets seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs.

National Historic Preservation Act (16 United States Code 470)

The National Historic Preservation Act (NHPA) requires federal agencies to evaluate the effects of federal discretionary actions on historical, archeological, and cultural resources. At the federal level, the Office of Historic Preservation carries out reviews under Section 106. At the state level, the California Environmental Quality Act (CEQA) requires that public agencies consider the effects of their actions on historically significant resources.

State Laws

California Environmental Quality Act (Public Resources Code 21000 et seq.)

The California Environmental Quality Act (CEQA) applies to actions directly undertaken, financed, or permitted by State lead agencies, and establishes state policy to prevent significant and avoidable damage to the environment. It requires any public agency to disclose the environmental impacts of its projects to the public through appropriate environmental documentation and to mitigate negative environmental impacts.

California Endangered Species Act (Fish and Game Code 2050 et seq.)

The California Endangered Species Act (CESA) requires mitigation for impacts to state-listed endangered, threatened and candidate species. CESA mandates that state agencies should not approve projects which would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy, and requires State lead agencies to consult with the CDFG during the CEQA process. CDFG is required to issue a written finding as to whether a project would jeopardize listed species and to specify reasonable and prudent alternatives that would avoid jeopardy.

Streambed alteration agreement (Fish and Game Code 1601 et seq.)

CDFG code section 1601 requires state and local government agencies to notify the CDFG before beginning construction projects which would divert, obstruct or change the natural flow or bed, channel or bank of any river, stream, or lake. Preliminary notification and project review generally occurs during the environmental process. When an existing fish or wildlife resource may be adversely affected, CDFG is required to propose reasonable project changes to protect the resource. These modifications are formalized in a streambed alteration agreement.

Native Plant Protection Act (Fish and Game Code 1900 et seq.)

The Native Plant Protection Act (NPPA) requires State agencies to utilize their authority to carry out programs to conserve endangered and rare native plants. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of the CDFG at least 10 days in advance of any change in land use.

Part 2. Affected Environment and Potential Environmental Consequences

Introduction

Organization of this chapter is based upon the environmental checklist developed by the Governor's Office of Planning and Research and is divided into the different subject areas found in the checklist. Each section of the chapter begins with a portion of the environmental checklist outlining criteria used to determine significance of potential impacts. Subsections describing the affected environment and the potential environmental consequences of the proposed project are provided to specify how each aspect of the environment might be affected by the proposed project. Standards for determining significance of potential impacts are further elaborated in the text.

Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	X	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	X

Affected Environment

Spring Mountain Road is neither a scenic highway nor does it offer scenic vistas in the vicinity of the project site. However, the character of the immediate surroundings has maintained a relatively natural appearance and rural character.

Standards

Project impacts would be considered significant if they would permanently degrade the existing visual character of the project site surroundings.

Environmental Consequences

There will be a short-term visual impact during the proposed project due to the presence of construction equipment and the necessary removal of some vegetation at the project site. However, the negative visual impact will not be significant and the long-term impact of the project, after re-vegetation, will be positive because it will result in the project site blending with the natural appearance of the surroundings.

Aesthetics will be an integral part of project design and will include a re-vegetation effort of native plant species that blend with the natural surroundings. Site specific measures for erosion control will be utilized, including erosion control methods that blend with the natural surroundings. The project site will have clearly defined limits and will not be visible from the adjacent public roadway. No significant direct, indirect or cumulative impacts to aesthetics are anticipated as a result of the project.

Agricultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	X

Affected Environment

Climate along with the mixture of volcanic and sedimentary soils in the York Creek watershed have made viticulture and winemaking important industries in the region. Numerous hillside vineyards and wineries are located within the watershed, many of which have been in operation since the late 1800's. Viticulture and winemaking are also important in the lower portion of the watershed on the floor of the Napa Valley.

Standards

Project impacts were considered significant if they would conflict with existing zoning for agricultural use or involve changes that could result in conversion of farmland to non-agricultural use.

Environmental Consequences

No impacts to agriculture are associated with implementation of the proposed project. The re-vegetation portion of the project takes into account concerns about Pierce's disease by actively excluding non-native plants that are known to harbor the insect vector for the disease.

Air Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	X	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	X	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	X
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	X

Affected Environment

California is divided geographically into 15 air basins to manage the air resources of the state regionally. The project site is located within the San Francisco Bay Area Air Basin and within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Napa Valley is located within the Napa Valley sub-region of the Bay Area Air Basin and is bordered by relatively high mountains with an average ridgeline of 2,000 feet, with some peaks reaching 4,000 feet. A strong up-valley wind frequently develops during warm summer afternoons, drawing air in from the San Pablo Bay. Down-valley drainage often occurs during the evening. The air pollution potential in the Napa Valley could be high if there were sufficient sources of air contaminants nearby. Summer prevailing winds can transport ozone precursors northward from the Carquinez Strait sub-region, effectively trapping and concentrating the pollutants when stable conditions are present. The local upslope and downslope flows created by the surrounding mountains may also re-circulate pollutants already present, contributing to buildup of air pollution. High ozone concentrations are a potential problem to sensitive crops such as wine grapes, as well as to human health (BAAQMD 1996).

Standards

An air district is designated “attainment” if it has met the standard for a given pollutant, and “non-attainment” if it has failed to meet the standard. The BAAQMD is currently non-attainment for Federal 1 hour standards for ozone and non-attainment for State 1 and 8 hour standards for ozone and PM_{10} (suspended particulate matter). The BAAQMD is currently in attainment for carbon monoxide.

The California Air Resources Board (ARB) has developed guidelines that help determine the significance of temporary and intermittent air quality effects resulting from construction activities. The ARB requires best available control technology requirements, and has a daily emission limit of 80 pounds per day of particulate matter smaller than 10 microns, an annual limit of 10 tons per year for any criteria pollutant, and record keeping and reporting requirements. Air quality impacts from the proposed project would be considered significant if 80 pounds or more of PM_{10} were to be generated daily from construction activities.

Environmental Consequences

The York Creek Diversion Modification Project would generate substantially less than 80 pounds per day of particulate matter and 10 tons per year of any ozone precursor. Construction activities that generate 80 pounds per day or more of PM_{10} are typically large-scale developments with extensive grading. Construction related emissions are generally short-term in duration, but may still cause adverse air quality impacts. PM_{10} emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle traffic and vehicle and equipment exhaust. Although the impacts from construction related air pollutant emissions are temporary in duration, such emissions can still represent a significant air quality impact. Mitigation measures will be included in the project to reduce air quality impacts to a level less than significant.

Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, U.S. Fish and Wildlife Service or National Marine Fisheries Service?	☐	X	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game, U.S. Fish and Wildlife Service or National Marine Fisheries Service?	☐	X	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?	☐	X	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X

Affected Environment

The following descriptions of plant, fish and wildlife resources in the project vicinity were developed after reviewing existing literature, consulting the California Natural Diversity Database, contacting agency and local experts, site visits and focused surveys for particular taxa at the project site.

Botanical Resources

White alder, various species of willow (*Salix* spp.) and bigleaf maple dominate the riparian zone along the lower reaches of York Creek, including the area adjacent to the diversion structure. However, one plant species occurring at the site is non-native Himalayan blackberry (*Rubus discolor*), identified as a major host plant for Pierce's disease in North Coast California vineyards including those in the York Creek watershed (P. Blake, NRCS, pers. comm. 2001).

Special-Status Plant Species

Preliminary Research

A list of special-status plant species (Appendix A) with potential to occur in the project area was compiled from three sources: (1) USFWS Species List provided for project; (2) California Natural Diversity Database (CNDDB) (DFG 2001b); (3) California Native Plant Society Inventory of Rare and Endangered Plants of California (CNPS 2001). Each species on the list was evaluated for its potential to occur within the project area; species that are potentially found in habitats relevant to the project area were noted, resulting in a short list of species having the greatest potential to occur in the project area. All special-status species were searched for, but particular attention was paid to those on this short list. Botanical surveys were planned for times that allowed observation of the features necessary for positive identification, particularly flowers. The CNPS Inventory (CNPS 2001) was consulted to determine the flowering times of each species (Appendix A).

Botanical surveys

The project site was visited three times (4 April 2001, 14 May 2001, 25 June 2001) by a DWR botanist, Mr. Harry Spanglet, covering the range of flowering times of special-status species on the list (Appendix A). The botanist surveyed the project area thoroughly on each visit, searching for special-status plants and compiling a list of all plant species observed on the site. No special-status species were found either within the project area or in the immediate vicinity; a complete list of plant species found appears in Table 1.

Table 1. Plant species surveyed at the York Creek diversion structure project site April – June, 2001.

Scientific Name	Common Name
Acer macrophyllum	Bigleaf maple
Aesculus californicus	California buckeye
Alnus rhombifolia	Alder
Calycanthus occidentalis	Spicebush
Galium aparine	Cleavers

Lithocarpus densiflorus	Tanbark
Polypodium californicum	California poppy
Polystichum californicum	California sword fern
Polystichum imbricans ssp. curtum	Sword fern
Quercus lobata	Valley oak
Rubus discolor	Himalayan blackberry
Toxicodendron diversilobum	Poison oak
Vitis sp.	grape

Fish and Wildlife Resources

The forest in the vicinity of the project site provides habitat for numerous wildlife species typical of the California Coast Ranges. Common species include black-tailed deer, coyote, bobcat, raccoon, skunks, and banana slugs. Birds include a variety of raptors and songbirds. During reconnaissance-level surveys by DWR biologists, turkey vultures, red-tailed hawks, violet green swallows, and juvenile great-horned owls were observed, among other species, in the York Creek Watershed. During focused surveys for Northern spotted-owls, western screech owls and barn owls were heard calling in the project vicinity as well.

Fish populations of York Creek are typical of streams in the Napa River/San Francisco Bay-Delta watershed (Moyle 2002). In the vicinity of the diversion structure there is a population of anadromous steelhead trout that has been well documented (DFG 2000) and is discussed below in greater detail. Along with steelhead, other fish species that occur in the lower portion of York Creek include sculpin, green sunfish, California roach, and Sacramento suckers. Signal crayfish are common in York Creek and during site visits made in 2001 DWR biologists observed sub-adult bullfrogs in York Creek in the vicinity of the diversion structure (DWR 2001a).

Special-Status Animal Species—T & E Species

The following section provides further information on the status of animal species that have been listed as threatened or endangered pursuant to the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA) and have reasonable potential to occur in the project vicinity. A list of special-status fish and wildlife species that were considered for their potential to occur in the vicinity of the project site appears in Appendix B. Steelhead trout and northern spotted owl are two listed species known to occur in the York Creek Watershed. It is anticipated that steelhead may be subject to short-term and temporary adverse impacts from the proposed project. Therefore, consultation between USACE and NOAA Fisheries, pursuant to section 7 of the ESA, will be required before a 404 permit is issued for the project.

Steelhead Trout (*Oncorhynchus mykiss*)

Steelhead of the federally listed Central California Coast (CCC steelhead) Evolutionary Significant Unit (ESU) occur in York Creek, which contains high quality spawning and rearing habitat for threatened CCC steelhead (NOAA Fisheries 2000a). An electrofishing survey by DFG and NOAA Fisheries during the summer of 2000, found juvenile

steelhead to be "abundant" in York Creek both above and below the York Creek diversion structure (DFG 2000). Although the survey was not intended to be exhaustive, more than 200 *O. mykiss* were observed during 90 minutes of shocking time within a stream reach extending approximately one mile downstream from the base of York Creek Dam (DFG 2000). Juvenile steelhead were also observed in York Creek during snorkel surveys conducted in the summer of 2001 (C. Malan, Friends of the Napa River, pers. comm. 2001).

Whereas non-anadromous forms of *O. mykiss* are not currently protected under the ESA, NOAA Fisheries (1997) recognized that "rainbow trout and steelhead in the same area may share a common gene pool." NOAA Fisheries additionally stated that "under certain conditions, anadromous and resident *O. mykiss* are apparently capable not only of interbreeding," but also non-anadromous *O. mykiss* can produce anadromous offspring and vice versa (NOAA Fisheries 1997). Surveys by DFG in 1975 and 1986, and a survey in 1981 by Robert Leidy of the U.S. Environmental Protection Agency, found *O. mykiss* upstream of York Creek Dam (Leidy 1984). The 1975 survey yielded an estimate of 20 rainbow trout every 100 feet from York Dam upstream to the headwaters of York Creek (DFG 1975). The electrofishing survey during 1986 yielded ten *O. mykiss* ranging in size from 92 to 198 mm fork length with a mean length of 131.5 mm (DFG 1986). Young-of-the-year *O. mykiss* were also observed upstream from York Creek Dam during a reconnaissance level survey by DWR biologists and DFG Warden Lt. Don Richardson on June 4, 2001 (DWR 2001a). There are no records of rainbow trout stocking in York Creek (J. Emig, DFG, pers. comm. 2001), suggesting that the rainbow trout in York Creek are native *O. mykiss*.

Northern Spotted Owl (*Strix occidentalis caurina*)

Northern spotted owls inhabit the mountains and humid coastal forests from British Columbia to central California. The subspecies was federally listed as threatened in July 1990 due to habitat loss throughout its range. Critical habitat units were designated in Washington, Oregon, and California to help focus conservation activities by identifying areas with essential habitat (USFWS 1992, 1995). The York Creek watershed is not located within a critical habitat unit.

Habitat utilized by spotted owls for roosting, nesting and foraging consists of a multi-layered canopy with moderate to high closure, a high incidence of large trees that contain cavities, large numbers of fallen trees, debris accumulations, and adequate open space below the canopy for flight. These habitat conditions occur primarily in old-growth and late-successional forests, which are threatened by timber harvest throughout much of the range of spotted owls. Northern spotted owls do not migrate, but will shift their ranges slightly in response to seasonal changes. Pairs form in February and March and egg-laying occurs in April to September. Eggs are incubated for 30 days and the young fledge 34-36 days after hatching.

A pair of northern spotted owls in the upper York Creek watershed maintains a territory approximately one mile upstream from York Creek Dam. Ted Wooster, a retired DFG

Biologist who is now working as a private biological consultant, has monitored the pair of owls annually since 1995. Mr. Wooster has informed DWR that the project would not affect the pair of spotted owls or their territory and that, furthermore, a pair of great horned owls that nests near the project site would deter spotted owls from traveling into the area (T. Wooster, pers. comm. 2001). Nevertheless, Mr. Wooster will continue to monitor the spotted owl pair during 2002 and DWR biologists will survey the project site for spotted owls to make certain that the project does not negatively impact spotted owls in the watershed. Spotted owl surveys will use protocols endorsed by USFWS.

Under California Forest Practice Rules, the Timber Harvest Plan (THP) for a proposed timber harvest is required to maintain 500 acres of owl habitat within a 0.7 mile radius and 1336 total acres of owl habitat within 1.3 miles of each nest site or pair activity center (CDF 2002). Alternatively, a THP can reduce habitat below the thresholds if the Director of DFG approves it as not constituting "take" of spotted owls. According to a habitat analysis done for the Terra Springs Habitat Conservation Plan (HCP) and Timber Harvest Plan (Butler and Wooster 2001), the habitat within 0.7 and 1.3 miles of the owl pair in the York Creek watershed is currently below the designated thresholds (Table2).

Table 2. Existing Nesting, Roosting, and Foraging habitat within the territory of northern spotted owl pair NP033 (from Butler and Wooster 2001).

Northern Spotted Owl Habitat NP033 (Acres)								
	500 feet		1000 feet		.7 miles		1.3 miles	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
N Nesting	17	17	40	40	115	115	224	224
R Roosting					86	86	207	192
F Foraging					120	120	545	525
NR&F Totals					**321**	**321**	**976**	**941**
O Non-habitats	1	1	32	32	664	664	2,424	2,459
Totals	**18**		**72**		**985**		**3,400**	

California Red-legged Frog (*Rana aurora draytonii*)

California red-legged frogs were listed as threatened on June 24, 1996 (USFWS 1996). Red-legged frogs are endemic to California and Baja California, Mexico and are typically found from sea level to about 5,000 feet (1,500 meters). Red-legged Frogs have been extirpated from 70 percent of their former range, and are now found in coastal drainages of central California, from Marin County south to northern Baja, Mexico and in isolated drainages in the Sierra Nevada, northern coast, and northern Transverse Ranges (USFWS 2000). In 1999 when the City of St. Helena first applied to the U.S. Army Corps of Engineers (USACE) for a 404 permit to remove York Creek Dam, USACE asked that a determination be made as to whether the site contained suitable habitat for California red-legged frogs. There are no historic records of red-legged frogs in the York Creek watershed, the watershed was not included as critical habitat for the species (USFWS 2001), nor is it considered a "core area" for focused recovery efforts (USFWS 2000).

The closest known population of red-legged frogs is Annadel State Park, approximately nine miles southwest of the York Creek watershed in Sonoma County. However, the draft recovery plan for red-legged frogs identified the importance of wildlife corridors between known breeding populations (USFWS 2000) and there have been few surveys for the species in the Napa Valley watershed (C. Brown, USFWS, pers. comm. 2001).

The city hired Ibis Environmental Services to conduct a red-legged frog habitat assessment at the project site in 1999. The conclusions of the assessment were that the Upper Reservoir behind York Creek Dam did contain suitable breeding habitat for red-legged frogs and that York Creek provided suitable dispersal, foraging, and refuge habitat (Ibis Environmental Services 1999). Because of the lack of survey information for York Creek and the positive habitat assessment in 1999, USFWS determined that formal surveys for red-legged frogs were warranted. DWR conducted the surveys following established protocols (USFWS 1997) in May and June 2001.

Results of the protocol surveys were formally reported to USFWS (DWR 2001a) and are summarized here. Two daytime and two nighttime protocol surveys for red-legged frogs found no occurrences of the species (adults, metamorphs or tadpoles) and an abundance of bullfrogs (sub-adults) within the Upper Reservoir area. All bullfrogs were relatively small individuals, suggesting a reproducing population. Additionally, habitat evaluation and reconnaissance-level surveys found that suitable red-legged frog habitat did not occur at the York Creek diversion structure.

Bullfrogs are known to prey on red-legged frogs (USFWS 2000) and the habitat in Upper Reservoir appears to favor bullfrogs in that there are several shallow (less than 0.6 m), warmwater pools (68 to 71^{o}F during survey). In addition, bullfrog tadpoles have been shown to reduce survival of red-legged frog tadpoles significantly, possibly through competition (Lawler et al. 1999). Furthermore, signal crayfish, which also prey on red-legged frogs (USFWS 2000), have been observed throughout York Creek by DWR biologists. If the bullfrogs and signal crayfish were not present, the Upper Reservoir site might represent a more suitable breeding and basking habitat for red-legged frogs. Under current conditions, however, the site is poor red-legged frog habitat (DWR 2001a).

California Freshwater Shrimp (*Syncaris pacifica*)

The California freshwater shrimp, listed as endangered pursuant to both the ESA and CESA, is endemic to the Napa Valley watershed but is not known to occur in York Creek (USFWS 1998). The closest known population of freshwater shrimp occurs in the Napa River near Calistoga, approximately 11.5 miles to the north of York Creek. The species is generally found in streams of low elevation (less than 116 meters) and low gradient (less than 1 percent), with undercut banks, exposed roots, overhanging woody debris, or overhanging vegetation (USFWS 1998). Habitat conditions considered "excellent" for the species include streams 30 to 90 centimeters in depth with exposed live roots along completely submerged undercut banks with overhanging vegetation (USFWS 1998). Bill Cox, DFG Fishery Biologist, surveyed York Creek for fishes in September 2000 (DFG 2000), and assessed the habitat suitability for California freshwater shrimp in the vicinity of the diversion structure. In his assessment, Mr. Cox states that the "stream was much

too shallow, had much too high a gradient, and had essentially no undercut banks or overhanging vegetation to provide any habitat for the shrimp" (B. Cox, pers. comm. 2001). The results of Mr. Cox's habitat assessment were reported to USFWS (DWR 2001a). The lower section of York Creek, where stream gradients might be more suitable for the species, is characterized by intermittent flow, going dry during the summer months, and therefore does not provide suitable habitat for the species.

Valley Elderberry Longhorn Beetle *(Desmocerus californicus dimorphus)*
The Valley Elderberry Longhorn Beetle, a federally-listed threatened species, is completely dependent on elderberry plants, where they spend most of their life in the larval stage living within the stems of the plant. Elderberry plants are a common component of the remaining riparian forests and adjacent upland habitats of California's Central Valley. No elderberry plants were found at the York Creek Dam site or at the diversion structure site.

Delta Smelt (*Hypomesus transpacificus*)

The Delta smelt is endemic to the Sacramento-San Joaquin Estuary and is known to occur in the lower Napa River where larval collections suggest that it may spawn during some years (Goals Project 2000). Delta smelt were federally and state listed as threatened in 1993 because of sharp declines in abundance during the 1980's (Goals Project 2000). Critical habitat for Delta smelt, designated on January 18, 1995 (USFWS 1994), did not include the Napa River. The species is adapted to living in estuaries where tidal cycles and the amount of freshwater inflow determine salinity levels. The Delta smelt spends the majority of its life in this mixing zone, but individuals are known to spawn upstream in backwater sloughs and channel edgewaters that are tidally influenced (USFWS 1999). In the Napa River, Delta smelt are known to occur upstream as far as Trancas Street in the City of Napa, which is also the approximate limit of salt water in the Napa River (J. Emig, DFG, pers. comm. 2002).

Sacramento Splittail (*Pogonichthys macrolepidotus*)

The Sacramento splittail was federally listed as threatened on March 10, 1999 (USFWS 1999) and is a state species of special concern. Critical habitat has not been designated for the species. The Sacramento splittail is found in the lower reaches of tributaries to the Sacramento-San Joaquin Estuary and in the Delta. The species spends much of its life cycle brackish waters and migrates into freshwater to spawn, particularly in areas with stream bank vegetation that is prone to flooding (Goals Project 2000). Adults and juveniles are known to occur in the lower Napa River (Goals Project 2000, USFWS 2001). Sacramento splittail occur upstream as far as Trancas Street in the City of Napa, which is also the approximate limit of salt water in the Napa River (J. Emig, DFG, pers. comm. 2002).

Chinook Salmon (*Oncorhynchus tshawytscha*)

Two federally listed ESUs of Chinook salmon, the endangered winter-run and the threatened Central Valley spring-run, migrate through San Francisco and San Pablo bays downstream of the project site. Neither winter-run nor spring-run Chinook salmon are known to occur in the Napa River.

The Central Valley fall/late fall-run ESU has been designated as a candidate for listing under the ESA and is a state species of concern. Central Valley fall and late fall-run Chinook salmon occur downstream of the project site in waters of San Pablo and San Francisco bays. Fall-run Chinook salmon have been observed in the Napa River as far upstream as Calistoga (J. Emig, DFG, pers. comm. 2002). However, it is not clear if they are historically related to wild fall/late fall-run Chinook salmon or if they are related to hatchery fall-run salmon released into the Delta or San Francisco Bay (NOAA Fisheries 1999).

Coho Salmon (*Oncorhynchus kisutch*)

Coho salmon south of the San Francisco were state listed in 1995 as endangered. North of San Francisco, including the Napa River drainage, coho are currently a candidate under consideration for state listing as endangered (DFG 2001). Coho in the Central California Coast ESU were federally listed in 1996 as threatened (NOAA Fisheries 1996). Critical habitat for the Central California Coast ESU encompasses accessible reaches of all rivers between Punta Gorda, in Humboldt County, and the San Lorenzo, in Santa Cruz County. This critical habitat includes Arroyo Corte Madera del Presidio and Corte Madera Creek, both of which enter the San Francisco Bay, but it does not include the Napa River drainage (NOAA Fisheries 1999). Leidy (1984) reported observing coho salmon in Corte Madera Creek and in Arroyo Corte Madera del Presidio. However, later studies conducted in 1995 and 1999 found no coho salmon (DFG 2001). Coho salmon once utilized the Napa River as spawning and nursery habitat, with salmon runs averaging 1,000 to 2,000 fish annually; however, coho are no longer found in the drainage (Anderson 1972; DFG 2001).

Bald Eagle (*Haliaeetus leucocephalus*)

The bald eagle is federally-listed as a threatened species. Generally increasing populations throughout the lower 48 states have led USFWS to propose removing bald eagles from the List of Endangered and Threatened Wildlife because they considered the species to have recovered (USFWS 1999). In California, bald eagles are considered a State-endangered species and there is no change proposed to their State-listing status (DFG 2001b). However, the number of nesting pairs and the nesting range has increased substantially in California since 1977 when bald eagles were found nesting in only eight counties. By comparison, bald eagles were found nesting in 28 counties during 1997. The nesting locations recorded in the CNDDB that are nearest to the York Creek project site are Lake Berryessa, about 17 miles to the northeast in Napa County, and McCreary Reservoir, approximately 17 miles due north in Lake County. The most recent occurrence of nesting bald eagles at these locations was for two adults and one young observed at a nest on the southwest edge of McCreary Reservoir on April 2, 2000.

The winter population of bald eagles has also increased, with more than 1,000 wintering birds in California during some years. Wintering bald eagles are recorded in the CNDDB from locations near Lake Hennessey, approximately 6.5 miles from the project site, and at Lake Berryessa. It is likely that eagles continue to use the sites for wintering. Bald eagles have not been observed by DWR biologists during site visits to the project site or during focused surveys for other species. Other raptors have been observed in the vicinity of York Creek Dam and Upper Reservoir, but no raptors have been observed in the immediate vicinity of the Diversion Structure.

Little Willow Flycatcher (*Empidonax traillii brewsterii*)

The little willow flycatcher is a state-listed endangered subspecies of bird that is also considered a federal species of concern (Appendix B). The species breeds from Tulare County north, along the western side of the Sierra Nevada and Cascades, extending to the coast in northern California. Little willow flycatchers prefer willow thickets, successional scrub, and brushy habitats in wet areas, pastures and mountain meadows. A qualified biologist will survey the project site for little willow flycatchers prior to project implementation.

Special-Status Animal Species—Species of Special Concern

Amphibian and Reptile Species of Special Concern

The Western spadefoot toad (*Spea hammondii*) is a state species of concern, and is usually found in grassland habitats, but will also utilize valley foothill hardwood woodlands. The foothill yellow-legged frog (*Rana boylii*) is a state species of concern that is found in rocky streams and moist meadows in most of Northern California west of the Cascade Range. The Northwestern pond turtle (*Clemmys marmorata marmorata*) is a state species of concern that are found in slow moving streams, ponds, lakes, and wetlands, and occur west of the Cascade and Sierra Nevada crest and also in the Coastal Ranges.

Fish Species of Special Concern

The Russian River tule perch (*Hysterocarpus traski pomo*) is a state species of concern, and is confined to the Russian River and its tributaries in Sonoma and Mendocino Counties. The green sturgeon (*Acipenser medirostris*) is a state species of concern and is currently being considered by NOAA Fisheries for listing as threatened under the ESA. In California, green sturgeon have been collected in small numbers in marine waters from the Mexican border to the Oregon border. They have been noted in a number of rivers, but spawning populations are known only in the Sacramento and Klamath Rivers. The longfin smelt (*Spirinchus thaleichthys*) is a state species of concern. Adults are concentrated in Suisun, San Pablo, and North San Francisco bays, and are regularly collected from the lower Napa River as part of the ongoing 20mm Delta smelt survey program (results available on the web at http://www.delta.dfg.ca.gov).

Bird Species of Special Concern

There are several bird species considered State Species of Special Concern or federal species of concern that potentially could occur in the vicinity of York Creek and the project site (Appendix B). None of these Species of Special Concern or federal species of concern has been seen at the project site during recent site visits. However, a qualified biologist will survey for sensitive bird species in the project area prior to project implementation to determine if any of the species are present.

Bat Species of Special Concern

Bat species of special concern that may occur in the vicinity of the York Creek Dam site include the Pacific Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), fringed myotis (*Myotis thysanodes*), western long-eared myotis (*Myotis evotis*), long-legged myotis (*Myotis volans*), Yuma myotis (*Myotis yumanensis*), and the western mastiff bat (*Eumops perotis*) (Appendix B). It is not likely that the Pacific Townsend's big-eared bat, Yuma myotis, or the fringed myotis would be found roosting at the project site because they prefer buildings, bridges, tunnels and caves. However, these three species might use the area for nocturnal foraging, considering that they are known to use stream corridors as foraging habitat. Western mastiff bats might use the site for roosting and foraging, because they are known to use tall trees, however preferring large rock crevices with vertical faces so they can drop off and achieve flight. The large wingspan of western mastiff bats makes it difficult to forage near trees and over rough terrain, where they tend to stay above the tree canopy. Both the long-legged myotis and western long-eared myotis species might utilize the York Creek Dam site for roosting and foraging, as they prefer large trees and snags with exfoliating bark.

Standards

Impacts to biological resources were considered significant if they would:

- Directly or indirectly disrupt or impair the growth, survival or reproductive success for species listed or proposed for listing as threatened or endangered under the federal ESA or California ESA.

- Directly or indirectly disrupt or impair the growth, survival or reproductive success of other special-status species such as CNPS 1B or 2 listed plants or California Species of Special Concern.

- Substantially reduce the quality or quantity of important habitat for special-status species.

Environmental Consequences

Botanical Resources

York Creek Diversion Structure

Grading and construction will result in the temporary removal of approximately 0.1 acre of riparian vegetation including two alder trees that are greater than 12" dbh (Table 3). Regular monitoring and specific success criteria will ensure that the re-vegetation results in properly functioning wildlife habitat that is similar to adjacent stands of native vegetation.

Fish and Wildlife Resources

Special-Status Animal Species—T & E Species

Steelhead Trout *(Oncorhynchus mykiss)*

Due to de-watering of the construction zones, the project will result in the temporary loss of habitat for aquatic species including juvenile steelhead that use the creek for rearing. During project implementation juvenile steelhead rearing in the vicinity of the construction zones potentially could be injured or killed due to project related activities. Placement of gravel berms or sand bags in York Creek upstream and downstream of the grading zones could harm fish if gravel or construction equipment crushes fish in the creek. In addition, fish might be harmed during relocation activities or if they become trapped in the de-watered portions of the creek.

Increased water turbidity might temporarily impact steelhead or other aquatic species rearing in York Creek when gravel berms are pushed into place to dewater the stream. Although it is less likely, sediment could potentially affect aquatic organisms downstream in the Napa River as well. If a sediment plume were to be released into the creek from a gravel berm, it could have the indirect effect of degrading water quality for fish downstream. This impact would be unlikely because clean material will be used to construct all gravel berms used for dewatering the creek. Once the berms are in place, they are expected to trap sediments from the grading zones and minimize any potential increase in turbidity downstream of the site. Habitat functions currently provided by existing vegetation are expected to be lost for several years while newly planted vegetation matures.

Fish passage improvements at the diversion structure would make the 0.5 miles between the diversion and York Creek Dam consistently accessible to spawning and rearing steelhead. Ultimately, once York Creek Dam removal is completed, the project will result in the long-term gain of approximately 2 miles of habitat above the current location of York Creek Dam that would be suitable for steelhead spawning and rearing. Using juvenile steelhead data collected during fishery studies in other creeks within the Russian River and Napa River watersheds, Hanson (2000) estimated that approximately 5,000

juvenile steelhead could be supported by the available rearing habitat upstream from York Creek Dam.

Table 3. Direct impacts to botanical, fish and wildlife resources anticipated as a result of the York Creek Diversion Structure Modification Project.

	Temporary Loss	Net Long-term Gain
Steelhead Habitat	**Approx. 175 ft**	**Approx. 0.5 mile (2640 ft)**
Riparian Vegetation	**0.1 ac** incl. 2 alders $\geq$ 12" dbh	**0**

Northern Spotted Owl *(Strix occidentalis caurina)*

Impacts to the northern spotted owl pair caused by the removal of vegetation should be negligible because the project will maintain a sufficient number of trees in the vicinity that could be used for roosting. DWR has consulted with USFWS regarding the removal of the trees and USFWS has tentatively agreed that the project will not negatively impact northern spotted owls.

California Red-legged Frog *(Rana aurora draytonii)*

Considering that the project site is not inhabited by red-legged frogs and currently provides poor habitat for the species, adverse impacts to red-legged frogs are not anticipated as a result of the project.

California Freshwater Shrimp *(Syncaris pacifica)*

The project will not result in adverse impacts to California freshwater shrimp.

Valley Elderberry Longhorn Beetle *(Desmocerus californicus dimorphus)*

The project will not result in adverse impacts to the Valley Elderberry Longhorn Beetle.

Delta Smelt *(Hypomesus transpacificus)*

Direct impacts to Delta smelt are not anticipated as a result of the project. Potential uncontrolled release of sediment from the project site could negatively affect water quality, which could have indirect impacts to Delta smelt living downstream in the Napa River. However, construction BMPs will be incorporated into the project to reduce potential downstream impacts to a level that is less than significant.

Sacramento Splittail *(Pogonichthys macrolepidotus)*

Direct impacts to Sacramento splittail are not anticipated as a result of the project. Potential uncontrolled release of sediment from the project site could negatively affect water quality, which could have indirect impacts to Sacramento splittail living downstream in the Napa River. However, construction BMPs will be incorporated into the project to reduce potential downstream impacts to a level that is less than significant.

Chinook Salmon *(Oncorhynchus tshawytscha)*

Direct impacts to Chinook salmon are not anticipated as a result of the project. Potential uncontrolled release of sediment from the project site could negatively affect water quality, which could have indirect impacts to Chinook salmon living downstream in the Napa River. However, construction BMPs will be incorporated into the project to reduce potential downstream impacts to a level that is less than significant.

Coho Salmon *(Oncorhynchus kisutch)*

The project will not result in adverse impacts to coho salmon.

Bald Eagle (*Haliaeetus leucocephalus*)

Impacts to bald eagles are not anticipated as a result of the project.

Little Willow Flycatcher *(Empidonax traillii brewsterii)*

Direct impacts to little willow flycatchers are not anticipated as a result of the project. If little willow flycatchers are found nesting in the project area, all work on the project will be temporarily halted until nesting is completed.

Special-Status Animal Species—Species of Special Concern

Amphibian and Reptile Species of Special Concern

Direct impacts to foothill yellow-legged frogs and northwestern pond turtles are not anticipated as a result of the project.

Fish Species of Special Concern Fish Species of Special Concern

Direct impacts to Russian River tule perch, green sturgeon and longfin smelt are not anticipated as a result of the project. Potential uncontrolled release of sediment from the project site could negatively affect water quality, which could have indirect impacts to fish species of special concern living downstream in the Napa River. However, construction BMPs will be incorporated into the project to reduce potential downstream impacts to a level that is less than significant.

Bird Species of Special Concern

Direct impacts to bird species of special concern (Appendix B) are not anticipated as a result of the project. Project implementation may result in the temporary reduction in bird foraging and roosting habitat. However, the temporary loss of foraging and roosting habitat will not be a significant impact to bird species of special concern because there is suitable habitat upstream and downstream of the project site. The fully implemented project is expected to provide suitable habitat for bird species of special concern.

Bat Species of Special Concern

Direct impacts to bat species of special concern (Appendix B) are not anticipated as a result of the project. Project implementation may result in the temporary reduction in bat foraging and roosting habitat. However, the temporary loss of foraging and roosting habitat will not be a significant impact to bat species of special concern because there is suitable habitat upstream and downstream of the project site. The fully implemented project is expected to provide potentially suitable habitat for bat species of special concern.

Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	X	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	☐	☐	☐	X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	X
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	X

Affected Environment

Ethnographic Setting

The project area lies within the territory historically occupied by the tribal group known as the Wappo. The Wappo belong to the Yukian language family, a very small language family that also includes the Yuki, the Coast Yuki, and the Huchnom tribes. This language family has no known linguistic relatives, and the Wappo language is considered to be most different among the four Yukian members (Miller 1978; Sawyer 1978). The territory of the Wappo is subdivided according to the five mutually intelligible dialects that were spoken by this group. These five territorial/dialectal subdivisions consist of: the Western (or Russian River) group; the Northern group; the Central group; the Southern group; and lastly, the Clear Lake group. The project area lies in the territory occupied by the Central Wappo.

Historic Setting

With a period of significance of 1900, the diversion structure has been determined to be an important feature of infrastructure for the town of St. Helena in the early 20th century (Eastman 2002). This water collection and conveyance facility was important for the growth and architectural development of the town in the early 20th century because it extended the city's water storage and distribution system, making more water service individually available to the host of new commercial and residential properties that were being built in addition to assuring more water available for fire protection.

Standards

A cultural resources study of the project's area of potential effects has been undertaken in compliance with Section 106 of the National Historic Preservation Act (36 CFR 800). The cultural resources study comprises review of both archeological and historical resources potentially occurring in the project area.

Archaeological Resources

Survey for potential archaeological resources in the proposed project area was coordinated by archaeologists from the DWR Environmental Services Office. The survey consisted of:

(1) a records and literature search of the *California Historical Resources Inventory* conducted by staff of the Northwest Information Center at Sonoma State University on March 19, 2001;

(2) a search of the *Sacred Lands File* conducted by the Native American Heritage Commission in November 2001, and

(3) a field survey conducted by DWR archaeologists on October 26, 2001.

No archaeological resources were identified within the proposed project area and a Negative Archaeological Survey Report was prepared. Should cultural resources be uncovered while conducting activities associated with the proposed project, all work will temporarily cease until the findings can be assessed by a qualified archaeologist and an appropriate course of action can be determined in consultation with the State Historic Preservation Officer.

Historical Resources

The Anthropological Studies Center (ASC) at Sonoma State University, Rohnert Park, California, conducted a study to inventory structures within the project's Area of Potential Effects (APE) and to evaluate their potential eligibility to the National Register of Historic Places (NRHP) (Eastman 2002). The properties were also assessed in accordance with Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines to determine if they are historical resources for the purposes of CEQA. Bright Eastman, Staff Architectural Historian for the ASC, conducted the field survey and historical research for properties within the project APE. The APE for this study is discontiguous, consisting of two related but separate features on York Creek alongside Spring Mountain Road—the Upper Reservoir and its associated structures, and the York Creek Diversion. These two properties have been formally evaluated and appear to be eligible for the NRHP. They may also be considered historical resources for the purposes of CEQA. The St. Helena Upper Reservoir and York Creek Diversion appear eligible for the National Register under Criterion A, at a local level of significance in the area of community planning and development.

Environmental Consequences

Archaeological Resources

An archaeological survey of the project area did not reveal the presence of any archaeological resources. Therefore, impacts to archaeological resources are not anticipated.

Historical Resources

The proposed project would have significant effects to the York Creek diversion structure, a resource considered eligible for the National Register of Historic Places and considered significant under CEQA. Mitigation for the project will be determined by USACE in consultation with the State Historic Preservation Officer.

Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	X
ii) Strong seismic ground shaking?	☐	☐	☐	X
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	X
iv) Landslides?	☐	☐	☐	X
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	X

Affected Environment

Geological Setting

Geological formations in the vicinity of the project site consist mainly of pumicitic ash-flow tuff of the Sonoma Volcanic Formation, Tertiary and Quaternary age, as well as sheared shale and sandstone, containing masses of chert, high-grade metamorphic rock, sandstone, greenstone, metagreenstone and serpentinite of the Jurassic and Cretaceous-age Franciscan Formation. A landslide adjacent to Spring Mountain Road and the Upper Reservoir is identified on a geologic map of the area (Fox et al. 1973), and is shown to occur at or near the contact between a mass of serpentinite (Franciscan Formation), ash-

flow tuff (Sonoma Volcanic Formation), and undifferentiated sediments (Franciscan Formation).

Seismic Activity

According to the California Geological Survey (formerly the Division of Mines and Geology), no known active or potentially active Alquist-Priolo Earthquake Fault Zones are located on or adjacent to the project site. This determination was made after consulting the most recent maps of Earthquake Fault Zones, available online at http://www.consrv.ca.gov/dmg/rghm/a-p/disclose.htm#What_is. However, there have been four major earthquakes in recorded history that have caused structural damage in Napa Valley. The most recent moderate earthquake in the area occurred on September 3, 2000. This earthquake registered at 5.2 on the Richter scale and occurred on a strike-slip fault on the southwest flank of Vedeer Mountain, near the City of Napa. According to U.S. Geological Survey maps, slopes within the City are in low slide occurrence areas (Wallace, Roberts, and Todd 1993).

Soils

Information on soils at the project site comes from Lambert and Kashiwagi (1978). Soils occurring in the upper portion of the York Creek watershed consist of loams in the Forward-Boomer-Felta series, which are weathered from igneous rocks and gravelly alluvium that have uplifted over time in this volcanic region. Much of the remainder of the York Creek watershed upstream of Upper Reservoir contains gravelly loams in the Boomer series, which have a moderate risk of erosion. Downstream of the project site near the confluence of York Creek and the Napa River, soils are clay loams of the Bale series, with slow runoff and only a slight risk of erosion.

Standards

Seismic Activity

The most recent maps of Earthquake Fault Zones were consulted to determine if the project was in the vicinity of a fault zone and thus might be subject to catastrophic failure during a seismic event. Alquist-Priolo Earthquake Fault Zones are regulatory zones that encompass surface traces of active faults with the potential for future surface fault rupture.

Soils

Project impacts would be considered significant if they were to cause a substantial increase in soil erosion and loss of topsoil in the project area.

Environmental Consequences

Seismic Activity

Because there are no known Alquist-Priolo Earthquake Fault Zones in the vicinity of the project, no seismic-related impacts are anticipated from the project. No significant direct, indirect or cumulative adverse impacts are anticipated from seismic-related events that might occur in the vicinity of the project.

Soils

The project would temporarily expose bare slopes in a region with highly erosive soils. However, erosion control and re-vegetation plans are mitigation measures that will be included in the project to reduce erosion impacts to a level less than significant.

Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site which is included on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	X

Affected Environment

Hazardous chemicals used during project implementation could include, but are not limited to, fuel, motor oil, and lubricants for construction equipment.

Standards

The threshold for determining significance was based on professional judgement as to whether or not the handling of hazardous materials during the project would pose a

significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Environmental Consequences

If hazardous chemicals such as fuel or motor oil were to be mishandled, leaking or spilled hazardous chemicals could potentially result in contamination of the soil or water in the project area. However, considering the small amount of hazardous chemicals that will be used for the project and the Best Management Practices that the project contractor will be required to use, the project will not create a significant hazard to the public due to exposure to hazardous chemicals.

Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	X	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	X
d) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	X
e) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☐	X
f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	X
g) Otherwise substantially degrade water quality?	☐	☐	☐	X
h) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X
i) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	X
j) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X

k) Inundation by seiche, tsunami, or mudflow? ☐ ☐ ☐ X

Affected Environment

Precipitation in the watershed averages approximately 35 to 40 inches (89 to 102 cm) annually (Lambert and Kashiwagi 1978). St. Helena receives an average of 35 inches of rain per year, most of which falls between November and March (Table 4). The York Creek watershed also contains freshwater springs that help maintain perennial flow in the upper portion of the creek during most years. However, the lower portion of the creek on the Napa Valley floor has intermittent flows in most years. Because York Creek is an ungauged stream, no continuous flow data exists for the creek. Some discrete flow information was recorded during DFG stream surveys. On July 9, 1973 flows ranged from 0.1 to 1.4 cfs with an average flow of 0.56 cfs below York Creek Dam (DFG 1973). On the June 13, 1974 survey, flow above York Creek Dam was estimated at 1.5 cfs, immediately below the dam was 1.0 cfs, 1,000 feet upstream of Highway 29 the flow was 0.5 cfs, and downstream of Highway 29 flows were intermittent (DFG 1974). On August 5, 1975 the flow at York Dam was determined to be 1.0 cfs (DFG 1975).

Table 4. Average Total Precipitation (in.) for St. Helena, Napa County, California.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
7.72	6.47	4.74	2.11	0.74	0.26	0.04	0.09	0.30	1.88	4.11	6.42	34.88

NOAA Western Region Climate Center. Period of Record: 2/10/1931 to 12/31/2000

Surface Water Resources

Pursuant to the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has regulatory authority over discharge of fill into York Creek and the Upper Reservoir because they are "waters of the U.S." as defined in the United States Code (33 U.S.C. 328.3). In March 2002, DWR delineated the areas within the proposed project boundaries that lie within the Ordinary High Water mark and are therefore subject to USACE jurisdiction. The Ordinary High Water mark was identified based on shelving and scouring marks in the reservoir area and the streambed.

As part of the "San Francisco Bay Basin Water Quality Control Plan" (CRWQCB 1995) the California State Water Quality Control Board designated a variety of beneficial uses that enhance the resources, services, and qualities of the San Francisco Bay and its tributaries. Existing beneficial uses designated for York Creek include cold freshwater habitat that may benefit anadromous fisheries, habitat suitable for fish migration, fish spawning habitat, and wildlife habitat. Potential beneficial uses include water contact recreation such as swimming, and fishing, as well as non-contact water recreation such as hiking, or camping. Existing beneficial uses of the Napa River include, but are not limited to, cold and warm freshwater habitat, fish spawning habitat, fish migration

habitat, and habitat suitable for the preservation of rare and endangered species. The San Francisco Bay Regional Water Quality Control Board has designated the Napa River as an impaired water body, pursuant to section 303(d) of the Clean Water Act, because of excessive levels of nutrients, pathogens and sedimentation/siltation. Total Maximum Daily Load (TMDL) action plans are currently being developed to address water quality problems in the Napa River. Medium priority has been placed on nutrients from agriculture, as well as pathogens from agriculture and urban runoff/storm sewers. High priority has been placed on sedimentation and siltation from agriculture, construction/land development, and urban runoff/storm sewers in the Napa River watershed.

Standards

Surface Water Resources

The proposed project also will be subject to review by the following resource agencies to make sure that it does not have significant adverse affects to the aquatic environment: (1) USACE as part of their 404(b)(1) alternatives analysis, (2) DFG will review the project under the authority provided to them by Section 1601 of the Fish and Game Code, (3) NOAA Fisheries will review the project as part of ESA Section 7 consultation with USACE, and (4) the San Francisco RWQCB will review the project to make sure that it is consistent with adopted water quality objectives of the basin plan (see Regulatory Setting in Chapter 1).

Environmental Consequences

Surface Water Resources

Because the proposed project would involve placing approximately 450 yd^3 of fill into York Creek and would require grading and clearing of vegetation adjacent to the stream, there would be potentially significant impacts to waters of the U.S. from the project. The proposed stream channel might be subject to increased bed and bank erosion before the stream reaches equilibrium.

Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	X

Affected Environment

The project area lies within the boundaries of Napa County and the lower portion of York Creek is within the St. Helena City Limits. The proposed project is in a predominantly rural region. Adjacent to the York Creek corridor, land use in the watershed is generally developed as vineyards and wineries. Downstream from the diversion structure, in the vicinity of Dean York Lane, land use is zoned as "Low Density Residential One Acre Minimum." Further downstream, in the vicinity of Highway 29, land use is zoned as either "Winery" or "Medium Density Residential." The York Creek corridor itself is designated as "Open Space." The City of St. Helena has adopted a strict land use policy as part of its General Plan to discourage residential development on the outskirts of the City. The project site is located outside of the Urban Limit Line designated in the General Plan and "intended to discourage urban sprawl during the planning period 1993-2010" (Wallace Roberts and Todd et al. 1993).

Standards

Impacts to land use and planning would be considered significant if they conflicted with land use designations in the General Plan for St. Helena or with Napa County land use goals and policies.

Environmental Consequences

The proposed project would not result in zoning designation changes of any lands and does not conflict with adopted local or regional plans. Therefore, no significant direct, indirect, or cumulative negative impacts to land use planning are associated with the project.

Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	X

Affected Environment

There are currently no mineral extraction activities in or near the project site.

Standards

Impacts to mineral resources could be considered significant if they were to result in a substantial loss of availability a known mineral resource or a locally important mineral resource recovery site.

Environmental Consequences

There are no significant direct, indirect, or cumulative negative impacts to mineral resources associated with the project

Noise

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	X	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	X	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X

Affected Environment

The proposed project is in a predominantly rural area with generally lower noise levels than in urban areas. The ambient noise environment over much of the City of St. Helena can be characterized as quiet and largely unaffected by human-made sources of noise. The major source of noise in the community is traffic noise. The noise in the project area is generated by automobile traffic on Spring Mountain Road, and agricultural activities on nearby vineyards.

Standards

Noise impacts could be considered significant if sensitive noise receptors such as residential units, hotels, schools, and churches were located near the project site.

Environmental Consequences

Construction equipment and activities will cause a temporary noise level increase at the project site during the 2-3 month construction window. The canyon and heavy vegetation should provide dampening of the noise to less than significant levels. Because

construction will not take place after dark, impacts to people and wildlife near the project site will be minimized. There are no significant direct, indirect, or cumulative negative impacts associated with noise for this project.

Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X

Affected Environment

The City encompasses an area of approximately 4 square miles, with a population of 6,008 as of January 1, 2001. There is adequate vacant and under-utilized land in the City to accommodate the maximum population projection of 6,389 by the year 2010, according to the City's General Plan.

Standards

Impacts to housing would be considered significant if they conflicted with the General Plan for the City or with Napa County housing goals and policies.

Environmental Consequences

This project would not entail a significant change in population, employment, or housing because it is a small project. The construction phase of the project would require short-term recruitment of a small number of employees. There would be no need for employees after the project is complete. The proposed project would not induce a substantial growth or concentration of population or displace area residents. The proposed project is in a rural area and the project would not cause or exacerbate a housing shortage. There are no significant direct, indirect, or cumulative negative impacts to housing associated with the project.

Public Services

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Fire: Will the project require additional staff or equipment to maintain an acceptable level of service (i.e., response time, equipment capacity)?	☐	☐	☐	X
Police: Will the project require additional staff or equipment to maintain acceptable service ratios, response times or other performance objectives?	☐	☐	☐	X
Schools: Will the project increase the population of school-age children in a K-12 school district that is or will be operating without adequate staff, equipment, or facilities?	☐	☐	☐	X
Other public facilities?	☐	☐	☐	X

Affected Environment

Fire protection in the City is provided by a progressive Paid Call/Volunteer fire department (http://fire.ci.st-helena.ca.us/page.cfm?name=welcome). A new fire station headquarters for the St. Helena Fire Department was completed during October 1998. According to the City's General Plan (Wallace Roberst and Todd, et al. 1993), service levels are adequate within the City limits. However, hillside areas on the perimeter of town have a very high potential for wildfires and provide the greatest service challenge due to the combination of highly flammable vegetation, long and dry summers, rugged topography, and the presence of people who live, work, and recreate in the hillside areas.

Standards

Impacts to public services would be considered significant if they conflicted with the General Plan for the City or with Napa County public services goals and policies.

Environmental Consequences

The proposed project would not cause development in the area and should not cause population growth. The project would not affect the service ratios, response times, or other performance objectives of local law enforcement or local fire protection agencies. The project would not change the risk for wildland fires. Schools would not be impacted because population would not be affected. There are no significant direct, indirect, or cumulative negative impacts to public services associated with the project.

Recreation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	X

Affected Environment

The park system in St. Helena consists of five parks totaling 12 acres. The City has a low ratio of active parklands to population, but many other recreation resources in the area exist. While the area around the project site is not an existing recreation resource area, it offers the potential for recreational activities such as hiking and fishing.

Standards

The project would have a significant negative impact on recreation if it were to increase the use of existing parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Environmental Consequences

No applicable permits and regulations pertaining to recreation would be required for the proposed project. No significant direct, indirect, or cumulative negative impacts to recreation are associated with implementation of the proposed project.

Traffic and Transportation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	X	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	X
e) Result in inadequate emergency access?	☐	☐	☐	X
f) Result in inadequate parking capacity?	☐	☐	☐	X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	X

Affected Environment

The project site is located adjacent to Spring Mountain Road, which is maintained by the county. The most recent traffic counts for Spring Mountain Road were completed in 1999 (Table 5). In the vicinity of the project site, Spring Mountain Road currently operates at a Level of Service (LOS) of A. Other roads in St. Helena are much more congested than Spring Mountain Road. Highway 29/Main Street in St. Helena has several intersections that operate at LOS of D or lower (Table 6).

Table 5 . Traffic counts taken by Napa County Roads Department on Spring Mountain Road during July and August 1999.

Location	Count	Date
Spring Mt. Rd. at Langtry Rd.	446	7/19/1999
Spring Mt. Rd. at Napa/Sonoma Co. Line	411	7/19/1999
Spring Mt. Rd. at St. Helena City Limit	1,112	8/4/1999

Table 6 . City of Saint Helena existing conditions level of Service.

Intersection	AM			PM			Weekend		
	LOS	**Vehicle volume**	**Vol./ delay (sec.)**	**LOS**	**Vehicle volume**	**Vol./ delay (sec.)**	**LOS**	**Vehicle volume**	**Vol./ delay (sec.)**
Main/Sulphur Springs	D			E			D		
Main/Grayson/ Mills	E			F			E		
Main/Pope/ Mitchell	B	17.3	0.61	D	19.1	0.80	D	16.5	0.81
Main/Spring	B			D			A		
Main/Hunt	A			D			B		
Main/Adams	B	15.4	0.62	D	27.8	0.84	C	19.6	0.76
Main/Pine	D			D			D		
Main/Madrona/ Fulton	B	13.3	0.61	D	21.6	0.83	D	19.7	0.80
Madrona/Oak	A			A			A		
Spring Mt./Madrona	A			A			A		

Standards

The Highway Capacity Manual (Transportation Research Board 1985) was used to evaluate the stop-controlled intersections in the City. Signalized intersections were analyzed using the Highway Capacity Manual Planning Method of Analysis. Both of these techniques are standards used for the evaluation of vehicle volume and delays per vehicle at intersections. The LOS for a road or intersection is a measurement that includes speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs. An A level represents virtually free-flow conditions, with unrestricted ability to maneuver in the traffic stream. Levels B, C, and D represent increasing levels of flow rate with correspondingly more interference from other vehicles in the traffic stream.

Environmental Consequences

Project construction would result in a temporary increase in truck traffic, primarily along Spring Mountain Road. Most of the truck traffic, approximately 40-45 roundtrips, would be generated by hauling boulders to the project site for construction of the boulder weirs as well as hauling gravel and cobble material for constructing cofferdams and for creating pools between the boulder weirs. Hauling through St. Helena and on Spring Mountain Road has the potential to cause impacts to traffic along the trucking route. Trucks turning in and out of the project site could also cause traffic hazards. However, mitigation measures will be incorporated into the project to reduce project-related traffic impacts to a level that is less than significant.

Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	X	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	X
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X

Affected Environment

The City's main water source is derived from Bell Canyon Reservoir, a 2,400 acre foot reservoir located northeast of the City. The Lower Reservoir is currently used for irrigation and other municipal purposes. The City has water rights to divert 11 cfs from York Creek and to store 210-acre feet of water in the Lower Reservoir. York Creek Dam and Upper Reservoir have not been used for water supply since 1983.

Standards

Impacts to utilities and service systems would be considered significant if they conflicted with the General Plan for the City or with Napa County goals and policies.

Environmental Consequences

The proposed project will not have significant adverse impacts to water supply, wastewater treatment, or solid waste treatment. Modifications proposed for the intake of the diversion would reduce the maximum instantaneous rate of diversion, but would not

affect the maximum storage capacity of the Lower Reservoir. No significant direct, indirect, or cumulative negative impacts to utilities or service systems are associated with this project.

Mandatory Findings of Significance

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	X

The St. Helena Upper Reservoir and York Creek diversion structure appear eligible for the National Register under Criterion A, at a local level of significance in the area of community planning and development. The proposed project would have a significant impact to the York Creek diversion structure. CEQA Guidelines specify that a substantial adverse change in the significance of an historical resource is a significant effect requiring preparation of an EIR. The alteration of an historical resource, as proposed by the project, is considered a substantial adverse change and therefore, a significant effect (Guidelines sec. 15064.5).

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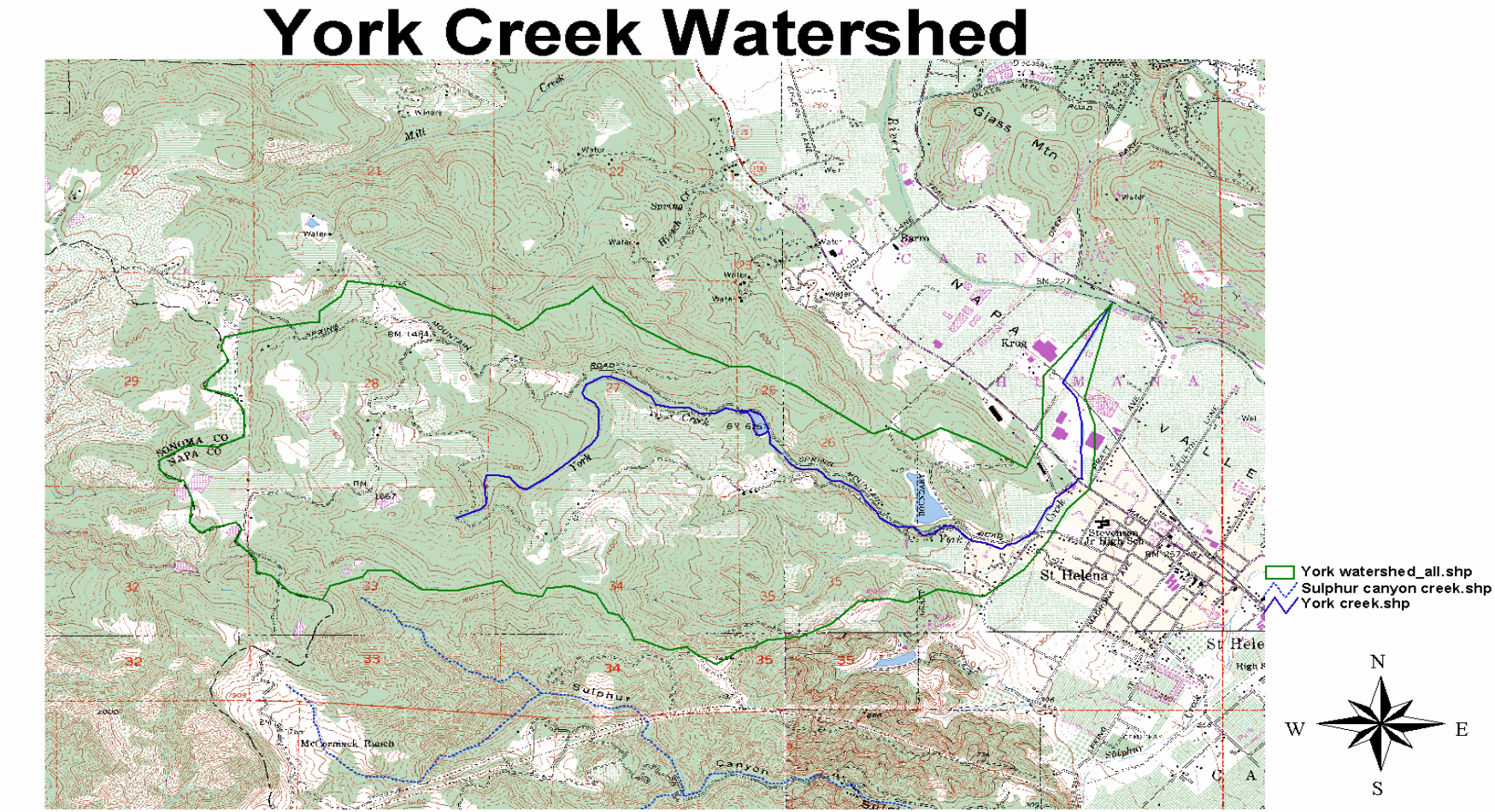

Figure 1. York Creek Watershed.

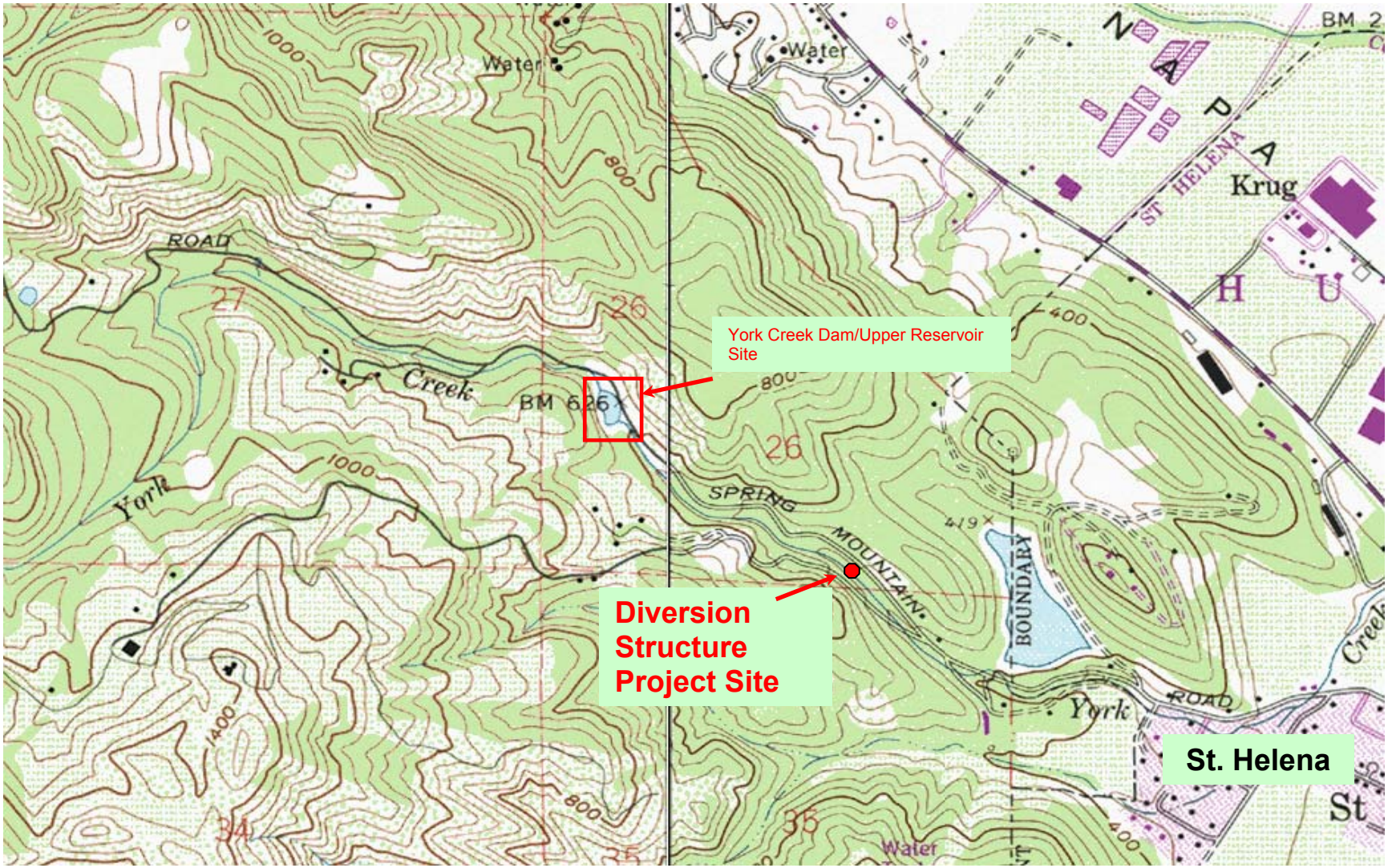

Figure 2. York Creek Site Map. Project location: T8N R6W SECT 26 USGS St. Helena quadrangle; **N 38.510 W 122.496.**

Appendix A. Special-status plant species with the potential to occur in the vicinity of the York Creek Diversion Structure Modification Project site.

Scientific name	Habitat	Status Federal/State/CNPS	Flowering Period
Amorpha californica var. napensis Napa false-indigo	Broadleaf upland forest openings, chaparral, cismontane woodland.	--/--/1B	April-July
Astragalus clarianus Clara hunt's milk-vetch	Serpentine.	E/T/1B	March-April
Blennosperma bakeri Sonoma sunshine	Grasslands, vernal pools.	E/E/1B	March-April
Ceanothus confusus Rincon ridge ceanothus	Pine forest.	--/--/1B	Feb.-April
Ceanothus divergens Calistoga ceanothus	Serpentine chaparral.	SC/--/1B	Feb.-March
Ceanothus sonomensis Sonoma ceanothus	Chaparral.	--/--/1B	Feb.-April
Cryptantha clevelandii var *dissita* Serpentine cryptantha	Serpentine chaparral.	--/--/1B	April-June
Downingia pusilla dwarf downingia	Grasslands, vernal pools.	--/--/2	March-May
Erigeron angustatus narrow-leaved daisy	Serpentine chaparral.	--/--/1B	May-Sept.
Eryngium constancei Loch Lomond button celery	Vernal pools.	E/E	April-June
Hemizonia multicaulis ssp.vernalis Tiburon tarweed/tarplant	Coastal grassland.	--/--/--	
Hesperolinon bicarpellatum two-carpellate western flax	Serpentine chaparral.	SC/--/1B	May-July
Hesperolinon breweri Brewer's western flax	Chaparral, woodland, grassland, mostly serpentine.	--/--/1B	May-July
Juglans californica var. *hindsii** Northern california black walnut	Riparian.	--/--/1B	April-May
Lasthenia conjugens Contra Costa goldfields	Grasslands, vernal pools.	E/--/1B	March-June

Layia septentrionalis Colusa layia	Sandy serpentine.	--/--/1B	April-May
*Limnanthes vinculans** Sebastopol meadowfoam	Mesic meadows, vernal pools.	E/E/1B	April-May
*Linanthus jepsonii** Jepson's linanthus	Chaparral, cismontane woodland, usually volcanic.	--/--/1B	April-May
Lupinus sericatus Cobb mountain lupine	Chaparral, woodlands, lower montane coniferous forest.	--/--/1B	March-June
Navarretia leucocephala ssp. *pauciflora** Few-flowered navarretia	Mesic meadows, vernal pools, coniferous forests.	E/E/1B	June
Penstemon newberryi *Var. sonomensis* Sonoma beardtongue	Rocky chaparral.	--/--/1B	May-July
Perideridia gairdneri ssp. gairdneri Gairdner's yampah	Broadleaf upland forest, coastal prairie chaparral, valley/foothill grassland.	SC/--/4	June-Oct
Plagiobothrys scriptus Scribe allocarya	Moist sites in grassland.	--/--/--	
Plagiobothrys strictus[3] Calistoga allocarya	Meadow/seeps, valley/foothill grassland, vernal pools.	E/T/1B	March-June
Poa napensis Napa bluegrass	Meadow/seeps, valley/foothill grassland, vernal pools, thermal springs.	E/E/	May-Aug.
Sidalcea oregana ssp. *hydrophila** Marsh checkerbloom	Meadow and seeps, riparian scrub/mesic.	SC/--/1B	July-Aug.
Trifolium depauperatum var. hydrophilum Water sack clover	Marshes/swamps, valley/foothill grasslands, mesic and alkaline.	--/--/1B	April-June

*Based on their ecological requirements, five species were considered to have the greatest potential to occur in the vicinity of the project sites and are addressed in greater detail in the text. E = Endangered on Federal or California Endangered Species lists

T = Threatened on Federal or California Endangered Species lists

SC = Species of Concern according to Sacramento Fish and Wildlife Office

1B = Considered by the California Native Plant Society as "Plants Rare, Threatened, or Endangered in California and Elsewhere"

2 = Considered by CNPS as "Plants Rare, Threatened, or Endangered in California, but more common elsewhere"

4 = Considered by CNPS to be "Plants of Limited Distribution – A Watch List"

Appendix B. **Special-status wildlife species with the potential to occur in the vicinity of York Creek Diversion Structure Fish Passage Improvement Project site.**

Species	Status Fed/State	California Distribution	Habitats	Reason for Decline or Concern
California freshwater shrimp (*Syncaris pacifica*)	E/E	Sonoma, Marin, and Napa counties.	Low land perennial streams, 1-3 feet deep.	Pollution, water withdrawal, channelization, and introduced predators.
Valley elderberry longhorn beetle (*Desmocerus californicus dimprphus*)	T/--	Central Valley below 3,000 feet.	Riparian and oak savanna habitats with elderberry shrubs	Loss and fragmentation of riparian habitats.
Sonoma Arctic Skipper (*Carterocephalus palaemon magnus*)	SC/--	This subspecies is restricted to two northern Sonoma County populations and one Mendocino County population.	Main food plant is Calamogrostis, a fairly common but locally restricted plant in coastal areas, generally with coastal pines and Baccharis. Populations have been found in second growth redwood forests, at the edge of forested clearings, in deep shade.	Habitat loss.
California red legged frog (*Rana aurora draytonii*)	T/--	Coast and coastal mountains from Humboldt to San Diego counties, and formerly in the Sierra Nevada foothills and mid-elevations from Butte to Fresno County.	Permanent and semi-permanent aquatic habitats, such as creeks and cold water ponds, with emergent and sub-emergent vegetation along the edges. May estivate in rodent burrows or cracks during dry periods.	Alteration of stream and wetland habitats by urbanization and hydroelectric projects, loss of seasonal wetlands and vernal pools.
Foothill yellow legged frog (*Rana boylii*)	--/SC	Coast range from the Oregon border to the Transverse Range, most of Northern California west of the Cascades, and western Sierras south to Kern County.	In or near rocky streams in a variety of habitats including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types, from 0 to 6,000 feet.	Alteration of stream and wetland habitats by urbanization and hydroelectric projects, loss of seasonal wetlands and vernal pools.
Western spadefoot toad (*Spea hammondii*)	--/SC	Central Valley and adjacent foothills, Coast Range from Santa Barbara County to Mexico.	Commonly found in grasslands, but also utilizes valley foothill hardwood woodlands.	Habitat loss and pesticides.

Northwestern Pond Turtle (*Clemmys marmorata marmorata*)	--/SC	Ranges west of Sierra Nevada and in Coast Range. Commonly found in western slope drainages.	Slow-water aquatic habitat. Hatchlings require shallow water habitat with relatively dense submergent or short emergent vegetation in which to forage.	Loss of suitable nesting habitat, predation, low rate of recruitment.
Chinook salmon, fall-run (*Oncorhynchus tshawytscha*)	Candidate species/ SC	Sacramento late-fall run chinook are found mainly in the Sacramento River, and most spawning and rearing of juveniles takes place in the reach between Red Bluff and Redding.	Majority of life is spent in open ocean, uses cold freshwater streams with suitable gravel for reproduction.	Loss of access to spawning areas, lower stream flows due to water diversion for urbanization and agriculture, introduced predators, and pollution.
Chinook salmon, winter-run (*Oncorhynchus tshawytscha*)	E/E	They return to the upper Sacramento River in the winter but delay spawning until the spring and summer. Juveniles spend five to nine months in the river and Sacramento-San Joaquin Estuary before entering the ocean.	Majority of life is spent in open ocean, uses cold freshwater streams with suitable gravel for reproduction.	Loss of access to spawning areas, lower stream flows due to water diversion for urbanization and agriculture, introduced predators, and pollution.
Chinook salmon, spring-run (*Oncorhynchus tshawytscha*)	T/T	Spring-run chinook salmon are primarily found in four Sacramento River tributaries (Butte, Big Chico, Deer, and Mill creeks). Spring-run chinook salmon enter the Sacramento river between February and June.	Majority of life is spent in open ocean, uses cold freshwater streams with suitable gravel for reproduction.	Loss of access to spawning areas, lower stream flows due to water diversion for urbanization and agriculture, introduced predators, and pollution.
Coho salmon (*Oncorhynchus kisutch*)	T/E	Punta Gorda in northern California south to and including the San Francisco Bay, excluding the Sacramento-San Joaquin River Delta.	Majority of life is spent in open ocean, uses cold freshwater streams with suitable gravel for reproduction.	None. Coho salmon once utilized the Napa River as spawning and nursery habitat. This species, however, is no longer found in the drainage.
steelhead trout (*Onchorynchus mykiss*)	T/--	Central coastal basins from the Russian River, south to	Cold freshwater streams with suitable gravel for reproduction.	Loss of access to spawning areas, pollution, and lower stream flows due to

		Soquel Creek, including San Francisco and San Pablo Bay basins, but excludes the Sacramento-San Joaquin River basins.		water diversion for urbanization and agriculture.
Sacramento Splittail (*Pogonichthys acrolepidotus*)	T/SC	Largely confined to the Delta, Suisun Bay, Suisun Marsh, and Napa marsh. Occasionally found in the lower reaches of the Feather, American, and San Joaquin Rivers.	Primarily freshwater fish but are tolerant of moderate salinity and can live in water with salinity of 10-18 ppt. They are benthic feeders. They migrate upstream from brackish water to spawn in freshwater.	Upstream access to a large portion of its former range has been restricted due to dams and diversions.
Delta Smelt (*Hypomesus transpacificus)*	T/T	Suisun Bay upstream of San Francisco Bay through the Delta in Contra Costa, Sacramento, San Joaquin, Solano and Yolo Counties.	Tolerates a wide range of salinity levels, spawns in freshwater, and spends most of its life span in the mixing zone of freshwater and saltwater, where salinity is approximately 2 ppt.	Reduced outflow from the Suisun Bay. Degradation and loss of estuarine habitat.
Longfin Smelt (*Spirinchus thaleichthys*)	--/SC	Concentrated in Suisun, San Pablo and North San Francisco bays, and also present in the Sacramento-San Joaquin estuary, Humboldt Bay, the Eel River estuary, and the Klamath River estuary.	Adult and juvenile longfin smelt occupy mostly the middle or bottom of the water column in the salt or brackish water portions of the estuary, although larval smelt are concentrated in near-surface brackish waters. Spawning takes place in fresh water, over sandy-gravel substrates, rocks, and aquatic plants.	Reduction in outflows, entrainment losses to water diversions, pollution, predators, and introduced species.
Green Sturgeon (*Acipenser medirostris*)	--/SC	Range includes the entire coast of California, but spawning populations are known only in the Sacramento and Klamath Rivers. The San Francisco Bay system, consisting of San Francisco, San Pablo, Suisun Bays and the Delta, is	Adults utilize salt water more often, spending limited time in estuaries or fresh water. Spawning takes place in deep, fast fresh water.	Entrainment, loss of spawning habitat due to dams and other diversions, and pollution.

		the southernmost reproducing population.		
Russian River Tule Perch (*Hysterocarpus traski pomo*)	--/SC	Confined to the Russian River and its tributaries in Sonoma and Mendocino Counties.	Clear, flowing water and abundant cover, such as beds of aquatic macrophytes, submerged tree branches, and overhanging plants.	Habitat degradation and pollution.
Bald Eagle (*Haliaeetus leucocephalus*)	T/E	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake and Mendocino Counties and in the Lake Tahoe Basin; reintroduced into central coast; winter range includes rest of California, except south eastern deserts, high alpine, and east of Sierras south of Mono County.	Nests and roosts in coniferous forests within 1 mile of a lake, reservoir, river, or the ocean.	Nest sites vulnerable to human disturbance, pesticide contamination.
Golden Eagle (*Aquila chrysaetos*)	BEPA/SC	Foothills and mountains throughout California.	Annual grasslands, chaparral, and oak woodlands. Nest in cliffs, escarpments, or tall trees.	Habitat destruction (reclamation of grasslands for agriculture), shooting, and human disturbance at nest sites.
Peregrine falcon (*Falco peregrinus*)	Delisted/ Delisted	Permanent on coast range. Summers in Cascade and Klamath ranges to Sierras to Madera County. Winters in central Valley south to Transverse and Peninsular ranges.	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes.	Pesticide contamination, loss of habitat.
Northern Spotted Owl (*Srix occidentalis caurina*)	T/--	Coastal, Cascade, and Klamath ranges.	Old growth or mixed mature and old growth coniferous forests, with uneven and multi-layered canopy.	Habitat loss, competition with Northern barred Owl (*Strix varia varia*).
Little willow flycatcher (*Empidonax traillii brewsterii*)	--/E	Breeds from Tulare County north, along the western side of the Sierra Nevada and Cascades, extending to the coast in northern California.	Willow thickets and successional scrub, brushy habitats in wet areas, pastures and mountain meadows.	Loss and degradation of riparian habitat and nest parasitism by brown-headed cowbirds.

		Typically found at 2,000-8,000 feet and a common spring (mid-May to early June) and fall (mid-August to early September) migrant at lower elevations.		
Bank Swallow (*Riparia riparia*)	--/T	Scattered populations exist in portions of Inyo and Mono counties and Central Valley, north and central coastal regions of California.	Habitat where sandy, vertical bluffs or riverbanks are available.	Rip-rapping of natural stream bank associated with bank protection projects, and drought years followed by flooding may also have impacted populations.
White-tailed Kite (=Black-shouldered Kite) (*Elanus leucurus*)	FWS/ Fully protected	California Coast.	Dry grass savannas, meadows and cultivated land with trees, up to 9000 feet.	Loss of habitat.
Short eared owl (*Asio flammeus*)	FWS/SC	Its breeding range is from Alaska to Central California in the west and Northern Quebec and Newfoundland to Northern Virginia in the east. In its winter range it moves into all of the Southern U. S. and south as far as Southern Mexico.	Wide open spaces such as grasslands, prairie, agricultural fields, salt marshes, estuaries, mountain meadows, and alpine habitat.	Destruction of marsh and tall grassland habitat in lowlands.
Western burrowing owl (*Athene cunicularia hypugea*)	FWS/SC	Lowlands throughout California, including Central Valley, coastal areas, northeastern plateau, and southeastern deserts.	Rodent burrows in sparse grassland or desert habitats.	Loss of habitat, human disturbance at nesting burrows.
Tricolored blackbird (*Agelaius tricolor*)	FWS/SC	Permanent resident in Central Valley from Butte to Kern Counties, scattered coastal locations from Marin to San Diego counties, breeds at scattered locations in Lake, Sonoma, and Solano counties, rare nester in Siskiyou, Modoc, and Lassen	Nests in emergent marsh vegetation or upland sites with water at or near the site. Requires large foraging areas including marshes, pastures, agricultural wetlands, dairies, and feedlots.	Loss of wetland and upland breeding habitats from conversion to agriculture, urban development, water development projects, pesticides contamination, and human disturbance at nesting sites.

		counties.		
Vaux's swift (*Chaetura vauxi*)	FWS/SC	Coastal range and western foothills of Sierra Nevada.	Often found foraging over lakes and ponds near or along the coast. Communal roosts are often in chimneys during migration especially in areas lacking suitable hollow snags for roost sites. Migrating swifts can be found flying over a range of habitats from grasslands, desert scrub and chaparral to mature coniferous forests.	Habitat loss.
Olive sided flycatcher (*Contopus cooperi*)	FWS/--	Sierra Nevada and Coastal ranges.	Coniferous forests up to 10,000 feet in the summer.	Habitat loss.
Hermit Warbler (*Dendroica occidentalis*)	FWS/--	Sierra Nevada and Coastal ranges.	Coniferous forests, especially fir and spruce.	Habitat loss.
Rufous hummingbird (*Selasphorous rufus*)	FWS/--	Nests in northwest California, lowland areas in Spring.	Coniferous, broadleaf and riparian woodlands.	Habitat loss.
Allen's hummingbird (*Selasphorous sasin*)	SC/--	Northern and Central Coastal range, Channel Islands, and Los Angeles.	Chaparral, wooded canyons, and mountain meadows.	Habitat loss.
Bell's sage sparrow (*Amphispiza belli belli*)	FWS/SC	Coastal range from Trinity to San Diego Counties.	Chaparral and desert scrub.	Habitat loss.
Yellow warbler (*Dendroica petechia*)	--/SC	All of California.	Shrubby areas, especially next to water to 9,000 feet.	Habitat loss.
Yellow breasted chat (*Icteria virens)*	--/SC	Coastal Range and Sierra Nevada.	Dense thickets and brush and successional scrub near water.	Habitat loss.
Loggerhead shrike (*Lanius ludovicianus*)	FWS/ SC	Resident in central and southern California and Owens Valley.	Shrubby grasslands, farms, and deserts.	Habitat loss.
Grasshopper Sparrow (*Ammodramus savannarum*)	FWS/--	Portions of w. California, including most coastal counties south to extreme northwest, Baja California (where resident), the west	Grass habitats including native prairies, hayfields, pastures, and grassy fallow fields.	Habitat loss due to grazing and agriculture.

		Sacramento Valley, and along the western edge of the Sierra Nevada.		
Lawrence's Goldfinch (*Carduelis lawrencei*)	SC/--	Southern Ca, Bay Area, Sacramento Valley.	Open oak woodlands, mesquite, and riparian thickets.	Habitat loss.
Black Swift (*Cypseloides niger*)	FWS/SC	Central and southern Sierra, the coastal cliffs and mountains of San Mateo, Santa Cruz, and Monterey counties; the San Gabriel, San Bernardino, and San Jacinto mountains of southern California; and a limited area in the Cascade Range.	Nests have been found only on cliffs behind or adjacent to waterfalls or steep coastal cliffs.	Human disturbance to nest sites.
Lewis' Woodpecker (*Melanerpes lewis*)	SC/--	Winters from southern British Columbia, to northern Mexico.	Open pine-oak woodlands, coniferous forests, and riparian woodlands. Associates with burned and logged woodlands.	Loss of riparian habitat and loss of burned ponderosa pine and Douglas fir habitat due to fire suppression.
Long-billed Curlew (*Numenius americanus*)	SC/SC	Northeastern California in Siskiyou, Modoc, and Lassen counties. Visitant from early July to early April along most of the California coast, and in the Central and Imperial valleys.	Prefers winter habitats include large coastal estuaries, upland herbaceous areas, and croplands. On estuaries, feeding occurs mostly on intertidal mudflats.	Habitat loss.
Yuma myotis (*Myotis yumanensis*)	BLM sensitive/ SC	Western North America. Common and widespread in California.	Open forests and woodlands with sources of water over which to feed. Typically forage over water in forested areas.	Loss of riparian habitats and permanent water sources.
Long-legged myotis (*Myotis volans*)	BLM sensitive/ CNDDB G5S4	Coastal and Sierra Nevada ranges, and Mojave Desert mountain ranges. Usually above 4,000 ft., but can occur from 0 to 11,000 feet.	Woodland and forest habitats. Forages in chaparral and coastal scrub.	Habitat loss.
Western long-eared myotis (*Myotis evotis*)	BLM sensitive/	Coastal, Sierra Nevada, and Cascade ranges, and	Woodland and forest habitats.	Habitat loss.

	CNDDB G5S4	Tehachapi Mountains.		
Fringed myotis (*Myotis thysanodes*)	BLM sensitive/ CNDDB G5S4	Sierra Nevada, Klamath, Coastal, Transverse, and Peninsular ranges.	Open woodlands. Prefers pinyon pine and juniper forests and valley foothill hardwood and hardwood-conifer forests at 4000 to 7000 feet.	Habitat loss.
Western mastiff bat (*Eumops perotis*)	BLM sensitive/ SC	Eastern San Joaquin Valley from El Dorado county through Kern County. Also found along the coast from Bay Area to Mexico, as well as peninsular and Transverse ranges.	Roosts and breeds in deep, narrow rock crevices; may also use crevices in trees, buildings, and tunnels; forages in a variety of semiarid to arid habitats.	Possible insecticide contamination and loss of foraging habitat, possible disturbance to roosting sites.
Pacific Western Big-eared Bat (*Corynorhinus townsendii townsendii*)	BLM and FS sensitive/ SC	Occupies the humid, coastal regions of northern and central California.	Coastal conifer and broad-leaf forests, oak and conifer woodlands, arid grasslands and deserts, and high-elevation Known roosting sites in California include limestone caves, lava tubes, mine tunnels, buildings, and other human-made structures.	Very sensitive to human disturbance.
San Joaquin Pocket Mouse (*Perognathus inornatus*)	SC/--	Between 1100 and 2000 feet in the Central and Salinas valleys.	Occurs in dry, open grasslands or scrub areas on fine-textured soils shrubby ridge tops and hillsides.	Habitat loss.